METHOD STATEMENT

Installation of W-Beam Metal Crash Barrier

1. Scope of Work

This Method Statement describes the procedure for installation of W-Beam Metal Crash Barrier along highways, medians, shoulders, embankments and approaches to structures, in accordance with MoRTH Specifications, IRC Codes and approved drawings.

2. Reference Specifications

MoRTH Specifications (5th Revision) – Clause 810 (Road Safety Barriers)
IRC:119 – Guidelines for Road Safety Barriers
IRC:SP:84 / IRC:SP:87 – NH Specifications
Approved GFC drawings and ITP

3. Materials

W-Beam rails, hot-dip galvanized
Steel posts (ISMC / Sigma / Z-section)
Spacer blocks
High tensile galvanized bolts, nuts and washers
Reflectors (Type B / Type C as specified)
Concrete (M20 / M25 where applicable)

4. Storage and Handling

Materials shall be stored on firm, dry and level ground. W-beams and posts shall be stacked on wooden blocks above ground level. Handling shall be done using crane/hydra with nylon slings. Dragging or scratching of materials shall not be permitted.

5. Site Preparation

The installation alignment shall be cleared of vegetation and debris. Soil condition along the installation line shall be checked. Traffic control and safety signage shall be provided as per approved traffic management plan.

6. Setting Out and Marking

Alignment of W-beam barrier shall be marked as per approved drawings. Offset from carriageway edge/median shall be as specified. Post locations shall be marked at approved spacing, generally 2.0 m.

7. Post Installation

Posts shall be installed either by mechanical hammering or by bored hole method with concrete backfilling, as specified in drawings. Posts shall be

installed vertically and aligned properly. Temporary bracing shall be provided to maintain alignment.

8. Spacer Block Installation

Spacer blocks shall be fixed to posts using specified bolts and washers. Correct orientation and uniform tightening shall be ensured.

9. W-Beam Installation

W-beams shall be fixed on the traffic-facing side of the posts. Beam overlaps shall be provided in the direction of traffic movement. Bolts shall be tightened uniformly and alignment and height shall be checked continuously.

10. Terminal Ends and Transitions

Terminal ends, flared ends or transitions shall be installed as per approved drawings. Finished installation shall be free from sharp edges or projections.

11. Reflectors

Reflectors shall be fixed on W-beams at specified spacing and shall face oncoming traffic. Fixing shall be secure and uniformly aligned.

12. Quality Control and Inspection

Material conformity and galvanization shall be verified. Checks shall include post spacing and verticality, beam height and alignment, overlap direction and tightness of bolts. Inspection shall be carried out as per approved ITP.

13. Safety Measures

All personnel shall use appropriate PPE. Barricading and traffic diversion shall be provided during works. Installation shall not interfere with live traffic without approval.

14. Environmental Measures

Excavated material shall be disposed at approved locations. Dust and noise shall be controlled and site shall be kept clean.

15. Completion and Acceptance

Installed W-beam barrier shall be cleaned and visually inspected. Work shall be accepted after satisfactory inspection by the Engineer.